

AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (Currently amended) A liquid crystal display comprising:
a display panel having a plurality of pixels;
a scanning unit connected to the display panel by a plurality of scanning lines so that the scanning unit controls the pixels of the display panel via the scanning lines;
a polarity arrangement timing generator (PATG) for generating a polarity arrangement control (PAC) signal from a plurality of predefined polarity arrangement control signals, each corresponding to a set of aperiodical polarity order; and
a polarity arrangement programmable data driver (PAPDD) connected to a plurality of data lines and receiving the polarity arrangement control signal so as to output [[a]] the corresponding set of aperiodic polarity order to the data lines so that the polarities of the pixels are distributed aperiodically;
wherein, when the display panel displays a plurality of frames, the polarity arrangement timing generator and the polarity arrangement programmable data driver control the polarity of one half of the frames to be opposite to the polarity of the other half of the frames, such that the polarity distribution of said one half of the frames is complementary to that of the other half of the frames.

2 (Previously presented) The liquid crystal display of claim 1, wherein the polarity arrangement programmable data

driver includes a plurality of sampling/hold registers for latching digital signals sent to the pixels of the display panel.

3 (Previously presented) The liquid crystal display of claim 1, wherein the polarity arrangement programmable data driver includes a plurality of sampling/hold registers, a plurality of digital/analog (D/A) converters, a plurality of operational amplifiers and a plurality of polarity selectors, the output of the sampling/hold registers being connected to the input of the D/A converters, the output of the D/A converters being connected to the input of the operational amplifiers so that the polarity selectors select the output signals from the operational amplifiers according to the polarity arrangement control signals, and then output the selected signal to the pixels .

4 (Previously presented) The liquid crystal display of claim 3, wherein polarities of the selected signals from the operational amplifiers are either positive or negative.

5 (Previously presented) The liquid crystal display of claim 1, wherein the polarity arrangement programmable data driver includes a plurality of sampling/hold registers, a plurality of D/A converters, a plurality of polarity selectors and a plurality of operational amplifiers, the output of the sampling/hold registers being connected to the input of the D/A converters and the output of the D/A converters being connected to the input of the polarity selectors so that the polarity selectors select the output signals from the D/A converters according to the polarity arrangement control signals, and then output the selected signal to the data lines through the operational amplifiers.

8 (Currently amended) A liquid crystal display driving method for controlling the polarity of a display panel that has a plurality of pixels, the method comprising:

a timing generation step for generating a polarity arrangement control (PAC) signal from a plurality of predefined polarity arrangement control signals, each corresponding to a set of aperiodical polarity order;

a selecting step for outputting [[a]] the corresponding set of aperiodic polarity order based on the polarity arrangement control signal; and

a polarity controlling step for sending the corresponding set of aperiodic polarity order to the display panel and thereby controlling polarities of the pixels of the display panel such that an aperiodic polarity distribution is exhibited, wherein, when the display panel displays a plurality of frames, a pre-determined number of picture frames are displayed in a way that one half of the frames have pixels with polarities exactly opposite to those of the pixels in the other half, such that the polarity distribution of said one half of the frame is complementary to that of the other half of the frames.